

Samuel Wendell Williston.

By J. M. ALDRICH, West Lafayette, Indiana.

Samuel Wendell Williston, the eminent palaeontologist and dipterist, died in Chicago on August 30, 1918. At the time of his death and for some years previous he was Professor of Palaeontology and Director of the Walker Museum in the University of Chicago.

He was born in Boston on July 10, 1852, and was therefore a little past 66 years old. His father was a blacksmith, uneducated but of native ability, who removed with his family to Manhattan, Kansas, in 1857. Here young Williston's boyhood was spent, and in due time he entered the Agricultural College in his home town, graduating from it in 1872. But his college course was interrupted, for he ran away from home at 18 and went to work as a railroad laborer, from which humble position he rose before he was 20 to be a transit man at a handsome salary for that time. However, he suffered greatly from malaria, and had to resign and go back home; after recuperating he finished his college course. Railroad engineering went flat in the panic of 1873, and he began to study medicine, "reading" in the office of a local doctor. In the summers of 1874 and 1875 he assisted Professor B. F. Mudge on fossil-collecting expeditions in Western Kansas, the work being done for Professor Marsh of Yale University. He spent the winter of 1875-6 in the medical school of the University of Iowa, and was invited to come to Yale to see Marsh in the spring; this resulted in a contract to work for Marsh for three years at \$40 a month, and in all to almost continuous employment with him for nine years, until 1885. He managed to finish his medical course and get his M.D. at Yale in 1880. But by this time his scientific bent was strongly developed, and it soon appeared that his work lay in following it rather than in the practice of medicine. He specialized in palaeontology, and received his Ph.D. under Marsh in 1885. His genius for anatomy led to an appointment as demonstrator in Yale Medical the following year, and after a short appren-

ticeship to the full professorship in human anatomy in 1887,—a striking recognition of his ability.

After three years in this position, he accepted a call to the University of Kansas in 1890 as Professor of Historical Geology and Palaeontology. Twelve years of his prime were spent in this institution, years crowded with productive labor. He helped organize the medical department of the University, and took on the deanship of it along with his other work; this almost broke his vigorous health, and he had to slacken his pace,—perhaps never again quite regained it.

The consciousness that he was working beyond his strength had something to do with his going to the University of Chicago in 1902 as Professor of Palaeontology. Here he was able to concentrate on a single specialty, officially at least, as he left medicine behind and thought he had left entomology also. In this place he spent the last fourteen years of his life, beginning under some unexpected handicaps and gradually working up to full recognition and honor.

In the outline just given, entomology is hardly hinted at, for the reason that Williston never held an official entomological position. But he found time to do much valuable work as a pioneer in dipterology. His employer would not allow him to publish in palaeontology, and he sought a field outside where he could be free to work and publish; this he found in the Diptera. His interest in the flies began to be serious about 1878. At this time Osten Sacken had returned to Europe, and there was not a single American student of the order but Edward Burgess, the Boston yacht designer, who published only one small paper. So Williston was virtually alone on the continent. In the absence of guidance, he plowed his way by main strength (as he often narrated to the writer) through descriptions of species until here and there he made an identification, which served as an anchor point for a new offensive. He had few definitions of genera, so had to work backward from the species. After a year or two of this tedious and time-wasting effort he came upon Schiner's *Fauna Austriaca*, in which the Austrian families,

genera and species of Diptera as known up to 1862-4 are analytically arranged and succinctly described. To his immense relief and satisfaction, he now found that all his American flies could be traced to their families, and most of them to their genera, in this fine work. He was so impressed by the saving of time accomplished that his own publications coming later show the effect of this early experience on every page; everywhere he has the beginner in mind and is clearing the way for him.

In a few years he began publishing tentative papers analyzing the American families and genera of the flies. These he extended and enlarged in a pamphlet in 1888, and again in a bound volume in 1896; and in 1908 published a third edition still more complete, with 1000 figures, his well-known Manual of Diptera. This third edition is his main contribution to entomology. It is a handbook unapproached by anything else dealing with a large order of insects. From necessity he published it at his own expense; it was eight years before the receipts from sales covered the cost of printing, but happily he lived to see this consummation.

His other papers of his early period, 1881-89, dealt with Asilidae, Conopidae, Tabanidae, and smaller groups, and especially with Syrphidae, in which his fine monograph of 1886 is still in universal use, and by the taxonomic genius of its author has created in the United States an ineradicable belief that the family is an easy one, well adapted for the beginner to publish in; a mistaken belief, but highly complimentary to the monographer.

From 1890 his more important papers were concerned with tropical Diptera (Mexico, St. Vincent, Brazil), and with bibliography. As his official duties grew more exacting, he gradually abandoned entomology, but he had as many farewell appearances as an opera singer, for he could not resist the temptation to come back again and again. Even as late as the spring of 1917, when he was visiting the writer and reveling once more in a collection of Diptera, his old enthusiasm came back so strongly that he planned describing some new genera,

and did in fact publish one (*Annals Ent. Soc. Amer.*, x, 23). But after 1896 he did little work on the order except in preparing the third edition of his *Manual*, which cost him two years of arduous work, as he drew 800 figures with his own hand. His deep interest in genera and his very wide acquaintance with them, together with his universally recognized taxonomic ability, made him in the period 1890-1900 the peer of Osten Sacken, Brauer and Mik as a world-authority in Diptera.

The types of Williston's new species are much scattered. His Syrphidae were acquired by the National Museum; the rest of his earlier collections by the University of Kansas; his *Biologia* material and that from St. Vincent went to London, and I understand were finally deposited in the British Museum; the American Museum of Natural History obtained his later collections, including some duplicates of type series from St. Vincent and perhaps Mexico. Williston did not believe in designating a single type specimen, hence in some cases his types of the same species are in two museums. He had no collection of Diptera in his last years, although he still retained his fine library in the order.

Although he never gave any formal entomological courses, he gave informal and even more valuable assistance both in Kansas and Chicago to several entomologists who were specializing on Diptera; among them W. A. Snow, Hugo Kahl, C. F. Adams, A. L. Melander and myself. We all admired him, and our admiration grew into deep love and veneration with the passing years. He had students outside of entomology like E. C. Case and C. E. McClung, who achieved high scientific standing. His lecture courses in palaeontology were full of broad generalizations about evolution, and in the highest degree stimulating and profitable to students with biological training, as I am informed by Melander, who took them. He did not have large classes at any time, and his lectures were mostly informal in style, drawn from a rich experience and given in intimate association with the student, the kind that would make a deep impression. But his life work was mainly directed to the larger circle outside his institution.

While in New Haven he received a visit from C. V. Riley, who urged him to come to Washington as first assistant in the Division (afterward Bureau) of Entomology. But Williston entertained a shrewd doubt as to whether he could be happy in a position subordinate to Riley, and declined the offer, although its acceptance would have meant a permanent position at an increased salary. This incident was narrated to me several times by Williston; it occurred about 1885.

In the last few years Williston published two volumes on fossil reptiles, his greatest specialty, and last winter was working on a handbook of reptilia, which was probably near completion when he was compelled to abandon it. If this volume can be printed, it will close up his work on the reptiles about as well as his Manual of Diptera did for the flies. My last mental picture of the man represents him on a day last winter, sitting at a table before a window in his study at home, in one hand a long-snouted reptilian skull, in the other a drawing pen with which he was rapidly making a sketch of it.

He attended the Pittsburgh meeting of the Entomological Society of America last winter and gave reminiscences of his early work on Diptera to an interested audience.

In physique he was large and vigorous, and mentally he was greatly endowed. I think I shall offend no living American dipterist when I say that he towered above us all. The truth of the assertion will be more clearly evident if we consider that his work on Diptera was never more than a side line, an absolute gift to science, accomplished in odd times while he was attaining distinction in anatomy and world-wide reputation in palaeontology, his main specialties.

Considering the positiveness of his opinions and his frankness in expressing them, his life was singularly free from scientific controversies, and especially from those leading down into personalities. In many long conversations with him, I do not recall that I ever heard him express a personal dislike for a scientific colleague, except in one case where he felt that advancement in a teaching position had been obtained by servility, and another where he felt that his own matured opinion had been treated rather contemptuously.

His last years were full of honors. He was a delegate to the International Zoological Congress at Monaco; Yale University gave him an honorary D.Sc.; he was chosen to the limited membership of the National Academy of Sciences, and the Entomological Society of America made him an Honorary Fellow, one of seven out of its membership of 600.

He was married in 1880 to Annie I. Hathaway, of New Haven, who survives him together with three daughters and a son.

I first knew him by correspondence in 1890, when on learning that I was beginning to work on Diptera he sent me separates of his papers. In January, 1893, I went to the University of Kansas to study, drawn entirely by his presence there. He received me with open arms, and helped me in every way possible until I left in July to take up my work in Idaho. Then I saw him only a time or two in twenty years, and had few and short letters from him, for he was a notably poor correspondent. After coming to Indiana in 1913 I was so near that we were frequently together. My sketch would be entirely inadequate without some acknowledgment of my personal obligation. In Kansas he lent me money; he wanted me to live in his house; he could not do enough to further my scientific aspirations. More than any other of my teachers, he became my ideal of a scientific man; and if in later years my ideal took on larger proportions, so he too seemed to expand in his mature powers; and at the close of his life I still feel that a splendid and inspiring example of scientific work and achievement is contained in his career.

Notes on Cynipidae, with Description of a New Species (Hym.).

By WILLIAM BEUTENMULLER, New York City.

Biorhiza nigra Fitch.

Biorhiza nigra Fitch, 5th Rep. Nox. Ins. N. Y. (Trans. N. Y. Agric. Soc., 1858 (1859), 782).

Acraspis politus Bassett, Trans. Am. Ent. Soc., vol. XVII, 1890, p. 85.